

Questacon

The National Science and Technology Centre



TRAVELLING EXHIBITION GUIDE



www.questacon.edu.au

Questacon
PRESENTS...

ZAP!

CLANK!

POW!

FEEL THE FORCES OF SCIENCE

**TRAVELLING
EXHIBITION GUIDE**

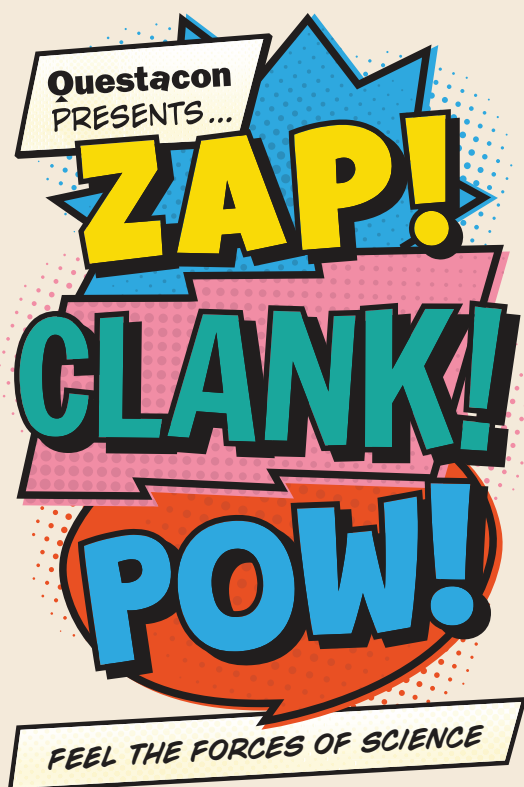
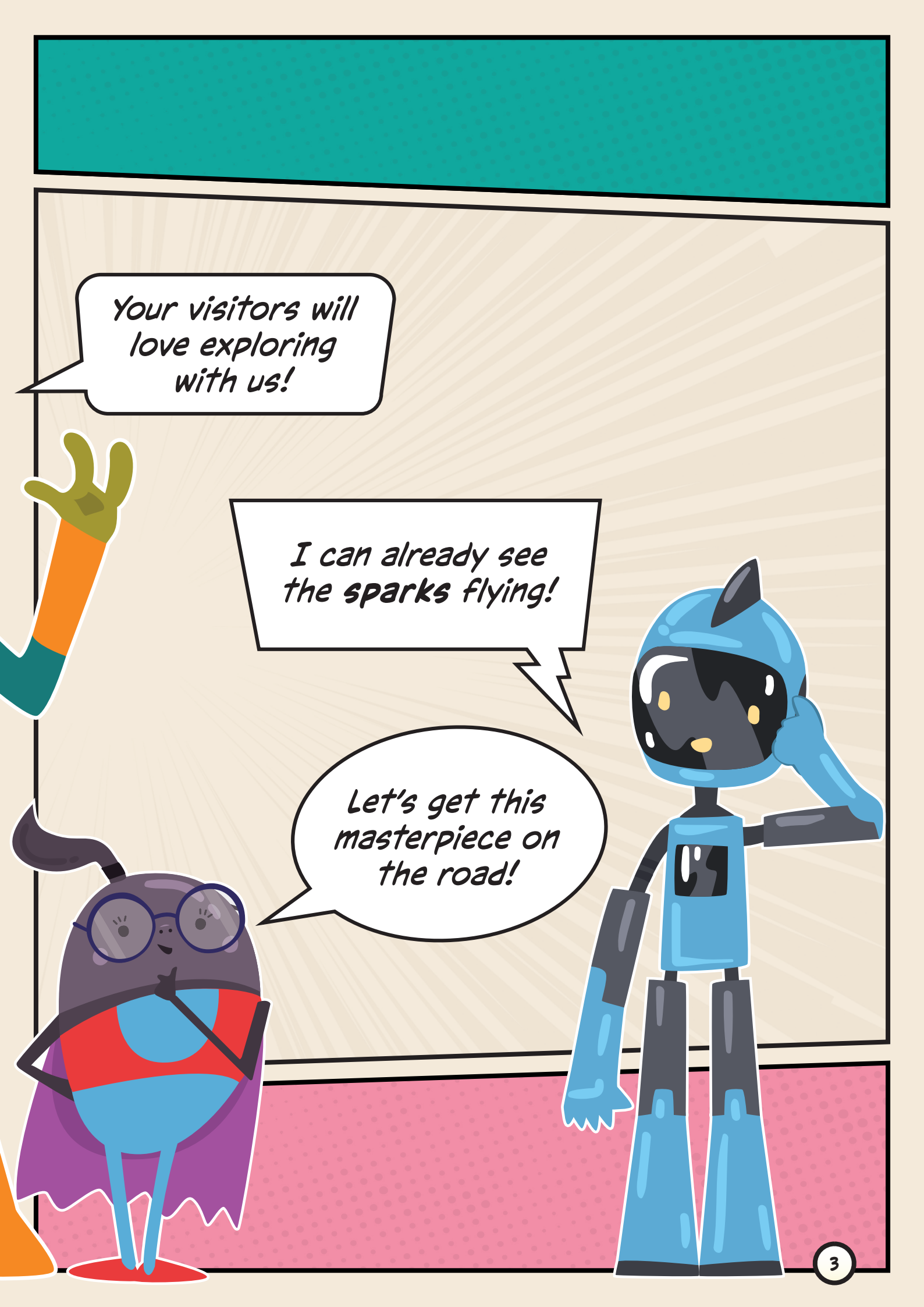


TABLE OF CONTENTS

QUESTACON TRAVELLING EXHIBITIONS	4
About the Exhibition	6
Exhibition Audience	8
Meet the Science Super Heroes	9
Exhibition Modules	10
ZAP! Electric Science	11
CLANK! Levers, Gears and Gizmos	23
POW! Forces and Motion	35
HOSTING MADE EASY	47
Educational and Promotional Material	48
Accessible Exhibition Content	49
Discover more from Questacon	50
Touring Exhibition Arrangements	51



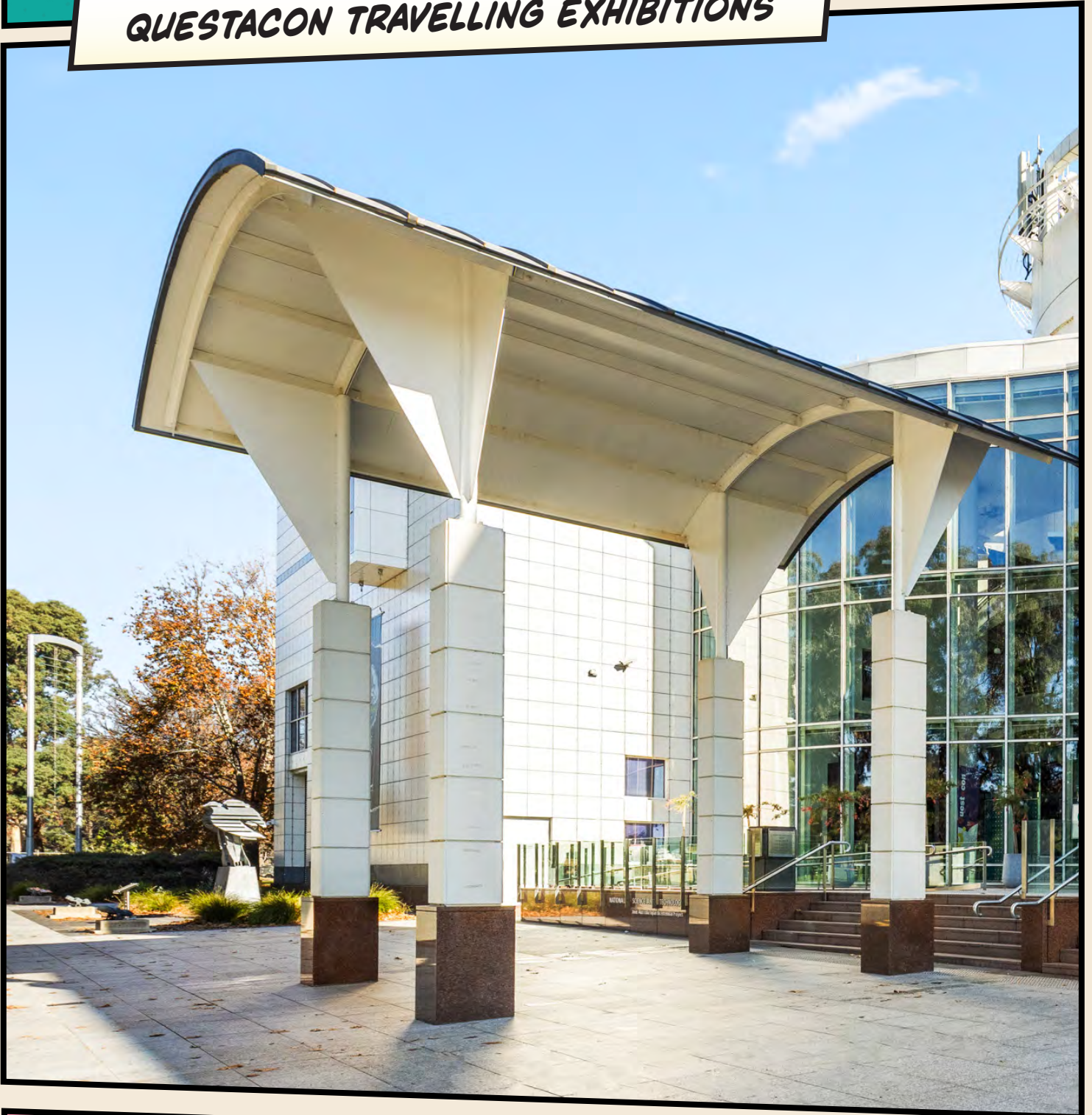
A comic panel featuring two characters. On the left is a purple, round character with glasses, a red and blue shirt, and a purple cape. On the right is a blue robot with a black face and yellow eyes. The background is a light beige with diagonal lines. The floor is pink with a dotted pattern. A teal bar is at the top.

*Your visitors will
love exploring
with us!*

*I can already see
the **sparks** flying!*

*Let's get this
masterpiece on
the road!*

QUESTACON TRAVELLING EXHIBITIONS





Questacon is committed to ensuring Australians everywhere can be inspired by science and technology through fun and interactive experiences, not just those able to visit our centre in Canberra.

As Australia's National Science and Technology Centre, Questacon takes science on the road, bringing engaging STEM experiences to regional communities across the country.

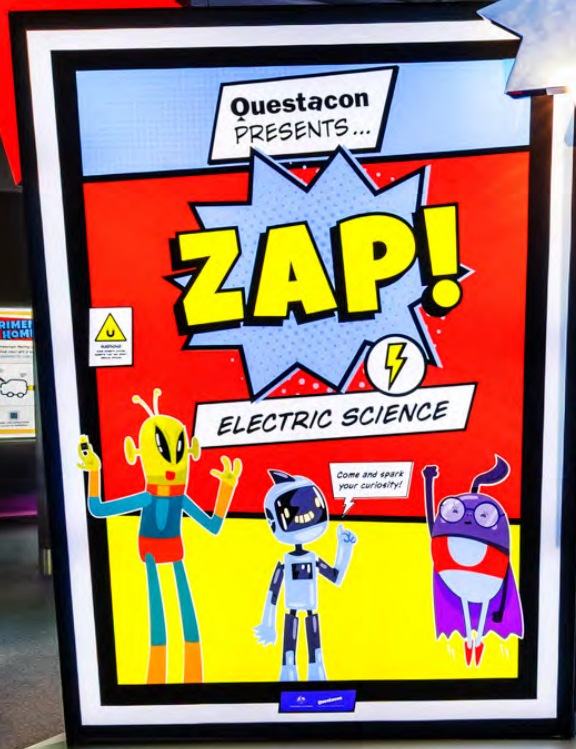
Through a range of travelling exhibitions and outreach programs, we nurture and support young Australians' curiosity, creativity and love of science.

From the outset, Questacon has designed its touring exhibitions to be flexible and accessible for venues of all sizes, from libraries to regional museums and galleries.

Every aspect of these exhibitions is crafted to be engaging as standalone modules or as part of a larger combined display.

Questacon designs world-class, interactive STEM experiences in flexible formats that meet the needs of regional venues.

ABOUT THE EXHIBITION





QUESTACON PRESENTS: ZAP! CLANK! POW!

Questacon Presents: ZAP! CLANK! POW! invites visitors to explore electricity, marvel at magnetism, learn about levers, get a grip on gears and discover the power of forces.

Featuring 18 interactive exhibits, this modular exhibition combines 3 of Questacon's latest travelling displays into one dynamic celebration of science.

The exhibits and experiences are inter-generational Questacon favourites, tried and tested crowd pleasers updated and reimagined for today's audiences.

Many exhibits include QR-linked demonstrations, and experiments that visitors can try at home.

Together, they showcase more than 36 years of Questacon's creative science communication expertise as Australia's National Science and Technology Centre.

EXHIBITION AUDIENCE



VIBRANT AND KID-FRIENDLY

With its vibrant, comic-book-style aesthetic, this exhibition immediately captures attention and invites hands-on engagement.

Questacon Presents: ZAP! CLANK! POW! will be enjoyed by visitors of all ages. Some exhibits require full-body movement and are best suited to visitors aged 8 and above.

This exhibition amplifies what Questacon does best, inspiring Australians through engaging and interactive science and technology.

ENGAGING AND ACCESSIBLE DESIGN

Every effort has been made to ensure Questacon Presents is engaging and accessible to diverse audiences with different backgrounds, interests and access requirements.

The needs of neurodivergent visitors, and those with physical, visual or auditory impairments, were carefully considered when curating exhibits and experiences.

All exhibits have been designed with accessibility in mind, including wheelchair access, adjustable viewing angles and sensory-friendly considerations.

MEET THE EXHIBITION SUPER HEROES

Three spectacular science super heroes – **Pickle**, **Bip** and **Spud** – are featured throughout **Questacon Presents**. They appear on exhibit content panels, wall graphics, and sometimes in the exhibits themselves! The characters ask questions, provide background information and encourage visitors to explore and experiment.



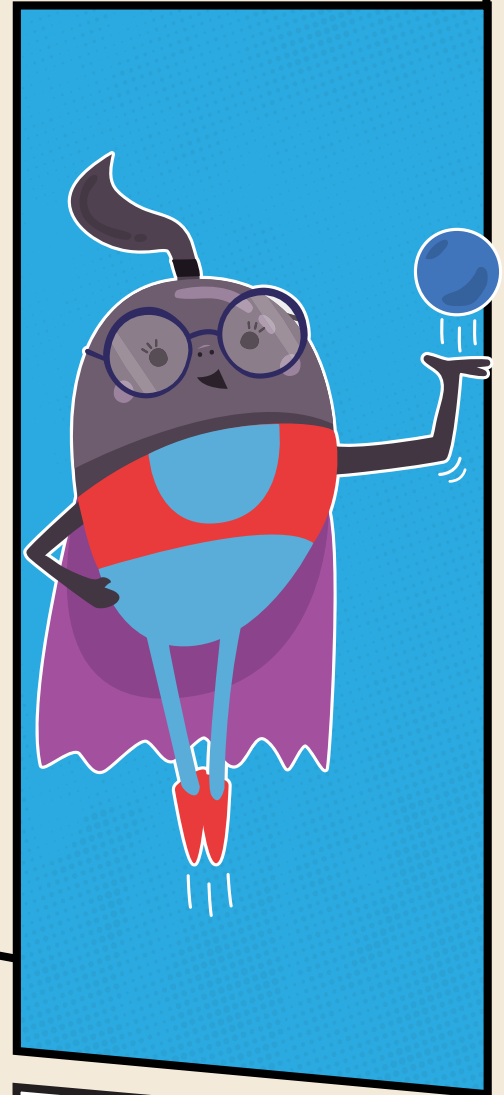
PICKLE **THE CONNECTOR**

Pickle links the exhibit content with the real-world through thoughtful observations. They connect ideas from the exhibit with existing visitor knowledge by using analogies or real-world examples.



BIP **THE DREAMER**

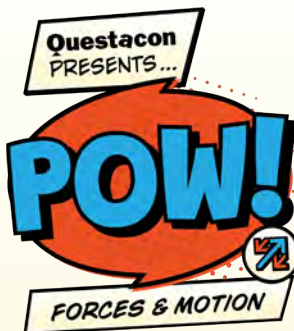
Bip is creative, curious and imaginative, a child-like dreamer who marvels at the world around them. For them, the answer is never as important as the question.



SPUD **THE EXPERIMENTER**

Spud is an action-oriented experimenter who points out cause and effect. Excitable and bold, they encourage visitors to experiment and try new things.

EXHIBITION MODULES



Questacon Presents: ZAP! CLANK! POW! is comprised of 3 modules that can be configured in any combination, with the option to hire single modules for smaller spaces.

Each module includes an entry panel, selfie wall and a number of Experiment at Home panels.

ZAP! ELECTRIC SCIENCE

Uncover the unexpected and surprising ways that electricity can be created and controlled. We mostly encounter electricity coming out of our power points or lighting up a room when we flick a switch at home. But electricity is so much more!

CLANK! LEVERS, GEARS AND GIZMOS

Every day we use machines and technology to make our lives easier. Many of the complicated machines that we use every day, like cars, clocks, washing machines and photocopiers, are made up of lots of simple machines working together.

POW! FORCES AND MOTION

Things don't move on their own. From the swirling motions of stars in a galaxy through to the bounce of a basketball, and right down to the microscopic jostling of air molecules around us, forces are what make everything in the universe move!

Questacon
PRESENTS...



ELECTRIC SCIENCE

EXHIBITION MODULE 1

Questacon
PRESENTS...

EXHIBITION MODULE 1

ZAP!

ELECTRIC SCIENCE





OVERVIEW

Questacon Presents: ZAP! Electric Science uncovers the unexpected and surprising ways that electricity can be created and controlled.

We mostly encounter electricity coming out of our power points or lighting up a room when we flick a switch at home. But electricity is so much more!

In this exhibition module visitors can create currents, view voltages and explore electromagnetism with an array of amped up interactive exhibits.

EXHIBITION COMPONENTS

This module is comprised of:

- One fabric back-illuminated introductory wall;
- One fabric back-illuminated photo opportunity Wall;
- One fabric back-illuminated activity wall; and
- 6 interactive back-lit exhibits.

EXHIBIT DESCRIPTIONS

Questacon
PRESENTS...

ZAP!

ELECTRIC SCIENCE



INTRODUCTORY WALL

Wave hello!

Visitors are greeted by **Pickle**, **Bip** and **Spud** as they enter the exhibition. As they navigate their way through the exhibition, the spectacular science superheroes, **Pickle the Connector** links the exhibits to the real world, **Bip the Dreamer** asks curly questions, and **Spud the Experimenter** encourages play.

Swap-in, swap-out fabric panels allow venues to easily customise the exhibition to suit a variety of layouts and spaces.

Where space is limited, modules can also be positioned against a wall.





PHOTO OPPORTUNITY WALL

Strike a pose!

Encourage visitors to strike a superhero pose amid the lightning bolt blasts, snapping a pic to share on social media with the tags **@questacon** and **#questacon**



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PRESENTS...

ZAP!

ELECTRIC SCIENCE

EXHIBIT DESCRIPTIONS



FERROFLUID

See magnetic fields created
by an electric current!

Visitors adjust power flowing through
an electromagnet suspended above
a shallow dish of black.

Make it at home!

Visitors can boost their magnetic charm
by creating a **DIY ELECTROMAGNET**
and exploring how attraction works
in action.





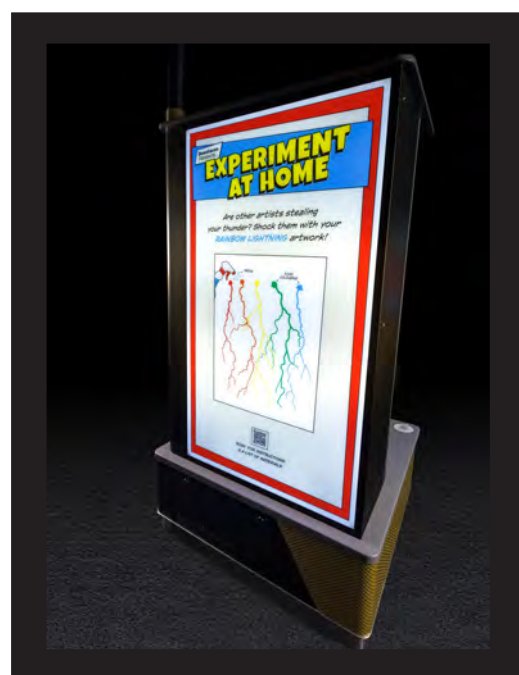
RISING PLASMA

Transform air into plasma using the power of electricity!

Visitors activate a bright spark of crackling electricity that climbs between two metal rods.

Light it up!

Colourful lightning artwork encourages visitors to recreate the wonder at home through a **RAINBOW LIGHTENING** experiment that crackles with creativity.



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ZAP!

ELECTRIC SCIENCE

EXHIBIT DESCRIPTIONS



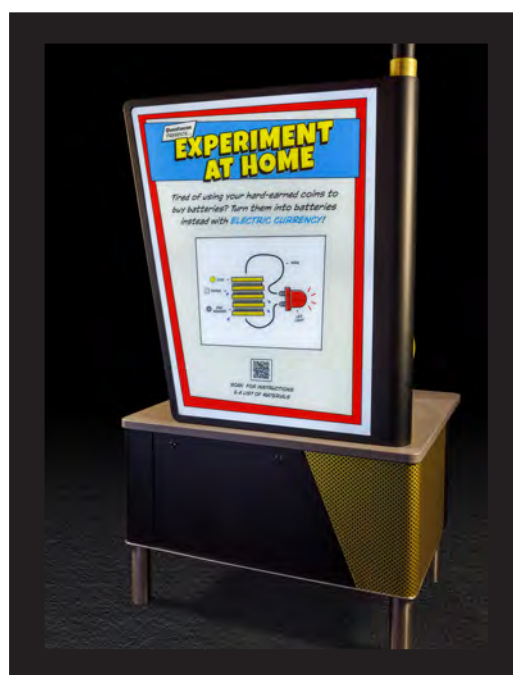
HAND BATTERY

Create a battery with your body!

Visitors hold onto copper and zinc rods to create a chemical reaction that produces electrical energy, just like a battery. A gauge shows how much electric current they are making.

Power up!

Visitors can discover the hidden energy in loose change with **ELECTRIC CURRENCY** turning everyday coins into mini power cells.





FLOATING SPHERE

Suspend a metal ball in mid-air with an electromagnet!

Visitors hold a metal ball under an electromagnet and release it to see it suspended in mid-air. A sensor adjusts the strength of the electromagnet to hold the ball in place, balanced against the pull of gravity.

It's a bird! It's a plane!

No – it's a **FLYING SQUID**, the original electrostatic marvel!



Questacon
PRESENTS...

ZAP!

ELECTRIC SCIENCE

EXHIBIT DESCRIPTIONS



MAKING ELECTRICITY

Feel how much energy it takes
to power a lightbulb!

Visitors feel the effort needed to spin
an electric generator as they turn lights
on and off in a model house.

Get your motor running!

Visitors can build the original
SIMPLE MOTOR. The spin-offs just
don't compare!





MAKE A CIRCUIT

Experiment, explore and play with electric circuits!

Visitors experiment and build circuits to activate electrical components such as a fan and radio. They can complete set challenges or design their own custom circuit!

Get creative!

Through the **GRAPHITE CIRCUIT** activity, visitors can make drawings that conduct electricity and literally light up their art.



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PRESENTS...

ZAP!

ELECTRIC SCIENCE

EXHIBIT DESCRIPTIONS



WIRE MAZE ACTIVITY WALL

Solve the Electricity Wire Maze!

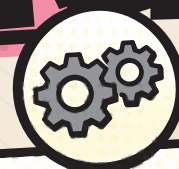
Visitors trace the power plugs to four different sources of electricity generation to learn about where our power comes from.

The graphic is a starting point to discuss sustainability and renewable energy.



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PRESENTS...

CLANK!



LEVERS, GEARS & GIZMOS

EXHIBITION MODULE 2

Questacon
PRESENTS ...

CLANK!

LEVERS, GEARS & GIZMOS

EXHIBITION MODULE 2



Questacon



OVERVIEW

Questacon Presents: CLANK!

Levers, Gears & Gizmos examines the machines and technology we use to make our lives easier every day.

Many of the complicated machines that we use every day – like cars, clocks, washing machines and photo copiers – are made up of lots of simple machines all working together.

In this exhibition module visitors can defy gravity with pulleys and levers, solve problems with gears and cams, and marvel at the beauty of intricate mechanisms.

EXHIBITION COMPONENTS

This module is comprised of:

- One fabric back-illuminated introductory wall;
- One fabric back-illuminated photo Opportunity Wall;
- One fabric back-illuminated activity wall; and
- 5 interactive back-lit exhibits.

EXHIBIT DESCRIPTIONS



INTRODUCTORY WALL

Wave hello!

Visitors are greeted by **Pickle, Bip** and **Spud** as they enter the exhibition. As they navigate their way through the exhibition, the spectacular science superheroes, **Pickle the Connector** links the exhibits to the real world, **Bip the Dreamer** asks curly questions, and **Spud the Experimenter** encourages play.

Swap-in, swap-out fabric panels allow venues to easily customise the exhibition to suit a variety of layouts and spaces.

Where space is limited, modules can also be positioned against a wall.



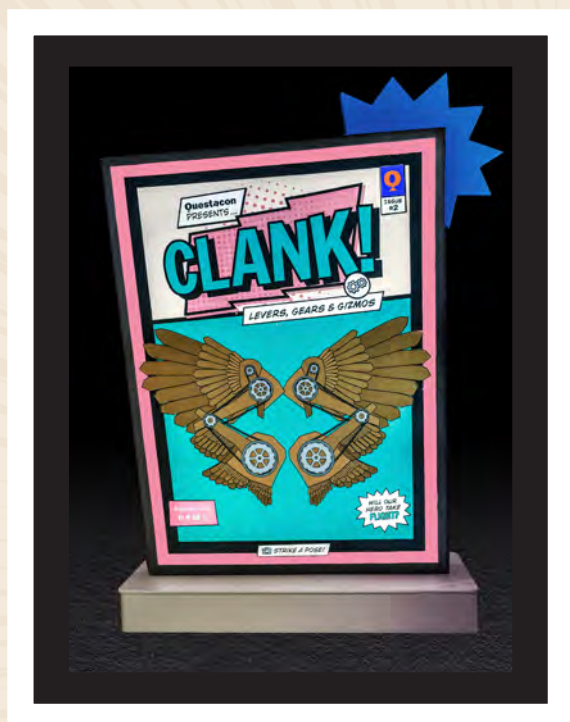


PHOTO OPPORTUNITY WALL

Strike a pose!

Encourage visitors to strike a superhero pose amid the lightning bolt blasts, snapping a pic to share on social media with the tags **@questacon** and **#questacon** in addition to your own.



Questacon
PRESENTS...

CLANK!

LEVERS, GEARS & GIZMOS

EXHIBIT DESCRIPTIONS



GARBLED GEARS

Build and play with a chain of connected gears!

Visitors move different gears around the board to drive a spinning animation. Visitors can experiment with moving the gears to change their speed, direction, and force.

Build this with your visitors!

The **CARDBOARD COGS** activity lets visitors design and test their own gear systems, exploring how motion spreads through connected parts.





TOYING WITH CAMS

Make mechanical music with cams!

Visitors listen to the rhythm and beats played by mechanical toy musicians as they rotate camshafts beneath them.

Looking for some bite-sized science?

Visitors can build a **CAM-POWERED CROCODILE** that chomps and moves in rhythm — a fun extension of mechanical motion.



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PRESENTS...

CLANK!

LEVERS, GEARS & GIZMOS

EXHIBIT DESCRIPTIONS



WACKY WHEELS

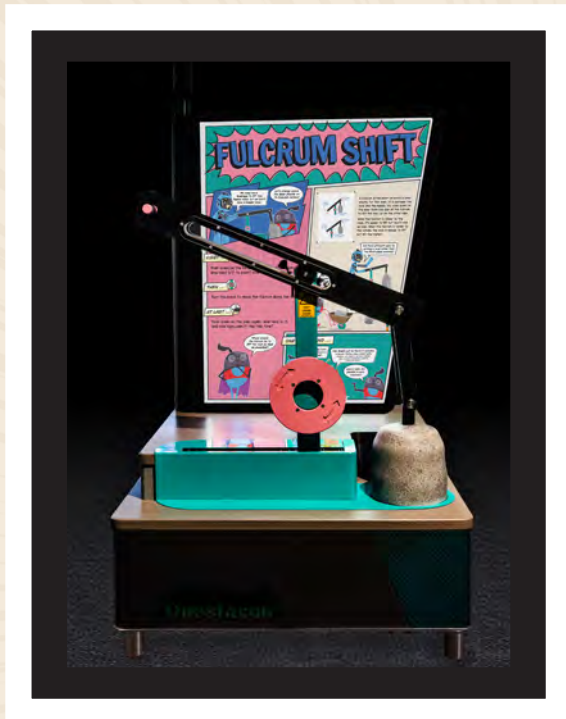
Match weird wheels with their perfect track!

Visitors roll cars with unique wheels down a series of tracks with different surfaces, twists, and turns. Some wheels can keep their cars on the straight and narrow, while others may go off the rails!

Don't reinvent the wheel!

With **TRIUMPHANT TRAIN WHEELS**, visitors can experiment with clever wheel shapes that hug the track and stay on course.





FULCRUM SHIFT

Apply leverage to lift a heavy rock!

Visitors push down on a lever to lift a rock. By moving the lever's fulcrum visitors discover how levers use their mechanical advantage to move the world around us.

Launch it!

Visitors can reate this first-class **CLASSIC CATAPULT** BYO force and get distance for free!

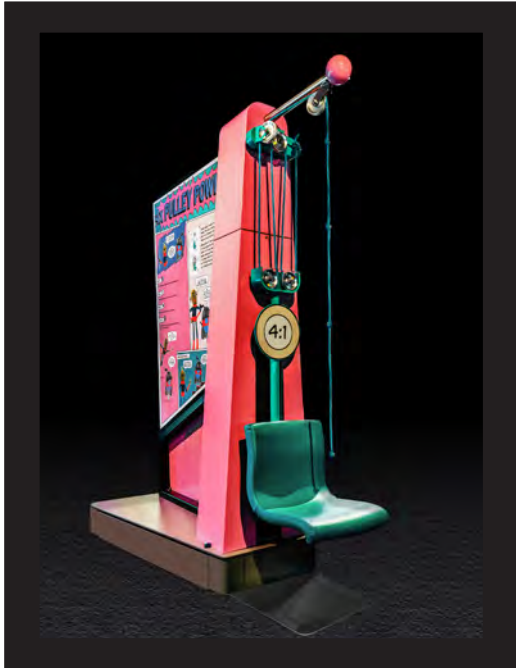


Questacon
PRESENTS...

CLANK!

LEVERS, GEARS & GIZMOS

EXHIBIT DESCRIPTIONS



PULLEY POWER X4

Pull yourself up by the bootstraps with the power of pulleys!

Visitors lift their own bodyweight by pulling on ropes, harnessing the mechanical advantage of pulleys to defy gravity!

PULLEY POWER X8

Level up the lift!

The ultimate pulley challenge gives visitors a hands-on way to compare lifting power—more pulleys, more height!



MECHANISM MADNESS

Activate an amazing mix of mechanisms!

Visitors drive a series of mechanisms that lift balls to the top of a ball run. The balls interact with other mechanism as they roll their way back to the bottom.



Questacon
PRESENTS...

CLANK!

LEVERS, GEARS & GIZMOS

EXHIBIT DESCRIPTIONS



CREATIVE CONTRAPTIONS ACTIVITY WALL

Invent and connect!

Encourage visitors to use recycled materials to build their own small-scale contraptions that move, spin or lift. Creative engineering made easy!



Questacon
PRESENTS...

POW!



FORCES & MOTION

EXHIBITION MODULE 3

Questacon
PRESENTS...

POW!

FORCES & MOTION

EXHIBITION MODULE 3

SWIRLING WORLD

WHAT IS IT?
The swirling world is a large, clear, dome-shaped container filled with a thick, white, viscous fluid. It is designed to demonstrate the effects of rotation on fluids.

FIRST...
Spin the dome to create swirling patterns in the fluid.

THEN...
Try changing the speed or direction of the dome.

AT LAST...
Watch how the patterns change!

ONE MORE THING...
The swirling world is a great way to see the effects of rotation on fluids. It is a fun and interactive experiment that can be done at home or in a classroom.



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OVERVIEW

Questacon Presents: POW!
Forces and Motion investigates how and why things move.

From the swirling motions of stars in a galaxy through to the bounce of a basketball, and right down to the microscopic jostling of the air molecules around us – forces are what makes everything in the universe move!

In this exhibition module visitors can roll balls around a funky funnel, craft creative flying contraptions and launch a metal ring into the air with electricity to discover the forces that – literally – make the world go around.

EXHIBITION COMPONENTS

This module is comprised of:

- One fabric back-illuminated introductory wall;
- One fabric back-illuminated photo opportunity wall;
- One fabric back-illuminated activity wall; and
- 6 interactive back-lit exhibits.

EXHIBIT DESCRIPTIONS

Questacon
PRESENTS...

POW!

FORCES & MOTION



INTRODUCTORY WALL

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PHOTO OPPORTUNITY WALL

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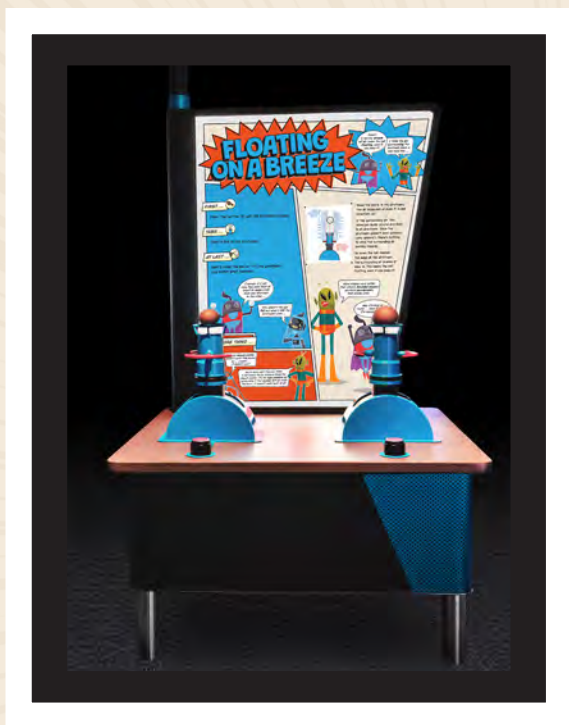


Questacon
PRESENTS...

POW!

FORCES & MOTION

EXHIBIT DESCRIPTIONS



FLOATING ON A BREEZE

**Suspend a ball in mid-air
using pressure!**

Visitors float a ball in a stream of fast-flowing air. They can experiment by poking the suspended ball, tilting the airstream, and floating multiple balls at once.

Less regretti, more confetti!

Through the **CONFETTI CHIMNEY** activity, visitors can explore airflow and watch colourful confetti dance on a cushion of air.





SWIRLING WORLD

Create twirling whirlpools of turbulence!

Visitors spin a dome filled with a shimmering fluid to create beautiful and complex turbulent currents inside.

A mesmerising maelstrom of fun!

Visitors can spin their own **STORM IN A JAR** to create miniature whirlpools and see turbulence in motion.



Questacon
PRESENTS...

POW!

FORCES & MOTION

EXHIBIT DESCRIPTIONS



RING LAUNCHER

Launch a metal ring into the air with electricity!

Visitors use their own energy to build up electric charge. Once released, it sets off an interplay of electric and magnetic forces that shoot an aluminium ring into the air!

Need a spring in one's step?

With the **MAGNETIC SPRING** activity, visitors can reveal how magnetic forces lift and launch light objects skyward.





BOUNCE BOOSTER

Use momentum to boost a ball's bouncing ability

Visitors raise and drop a stack balls. The ball at the bottom of the stack barely bounces, while the ball on top rebounds higher than expected!

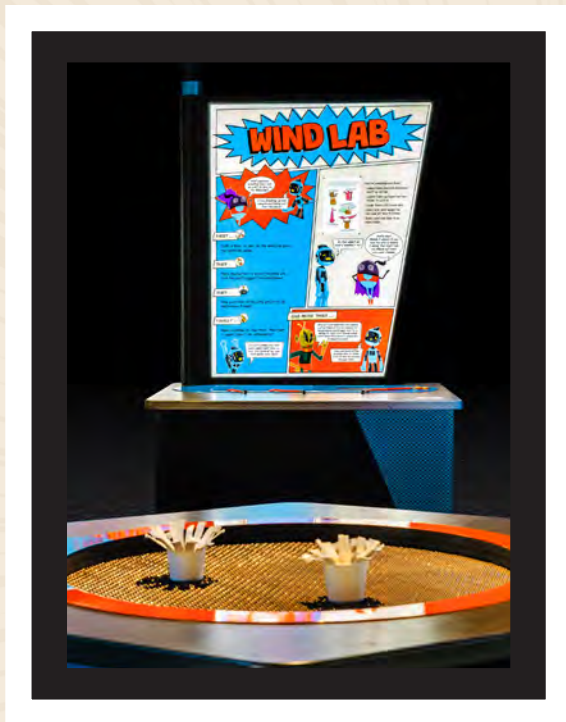


Questacon
PRESENTS...

POW!

FORCES & MOTION

EXHIBIT DESCRIPTIONS



WIND LAB

Create, test and refine crafty flyers!

Visitors craft their own flying creations from paper, cardboard and string to test in the Wind Lab's strong upwards airstream.

A revolution in evolution

Visitors can explore where the wind will take them with their very own **PAPER SEED SPINNER.**





GRAVITY WELL

Roll-up for a whirling dance
of gravity and momentum

Visitors roll balls around a strange
funnel, watching them seemingly
defy gravity for a while - but none
can escape their fate!

It's high impact science!

Visitors create a meteoric mess with
KINETIC CRATERS.



Questacon
PRESENTS...

POW!

FORCES & MOTION

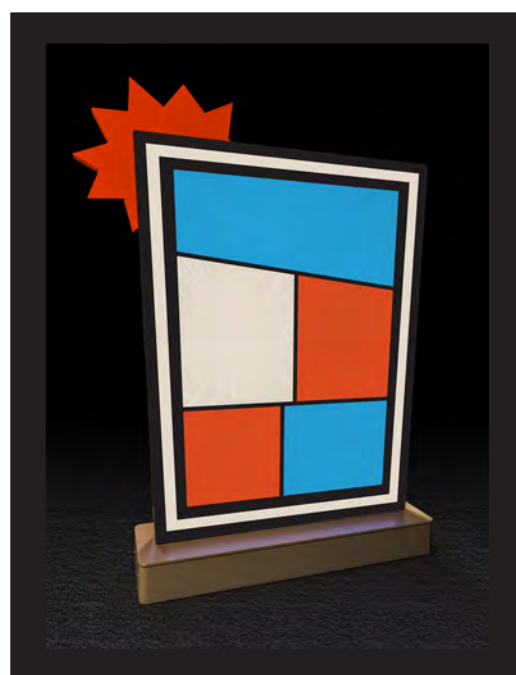
EXHIBIT DESCRIPTIONS

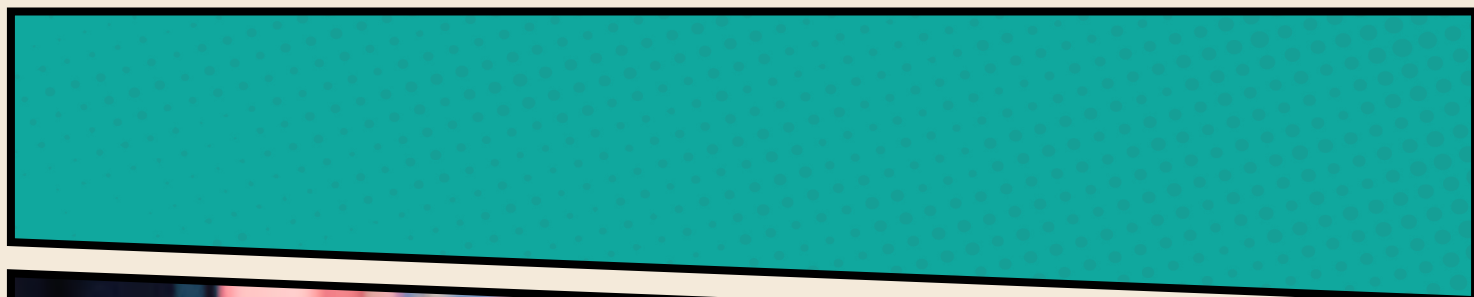


FIND THE FORCES ACTIVITY WALL

Discover the forces!

Visitors uncover the forces changing how each character is moving in this chaotic scene. They may be experiencing more than one!





HOSTING MADE EASY

EDUCATIONAL AND PROMOTIONAL MATERIAL



Questacon will provide support materials and links to additional resources to help you deliver the best possible experience for your visitors, including:

STAFF NOTES

Staff notes break down the science and technology behind the exhibition and include facilitation ideas for engaging visitors around each exhibit.

You don't need to be an expert to facilitate these experiences – simply by playing alongside visitors, asking questions and knowing where to find answers, staff can help visitors feel inspired to discover more about the world around them.

Links to bonus facts and trivia, online articles, videos and learning tools further support understanding.

PROMOTIONAL MATERIALS

Questacon will provide promotional resources including a **marketing style guide**, **logos**, **images** and **social media examples**.

A **media release template** and talking points will also be provided to help with media enquiries.

ACCESSIBLE EXHIBITION CONTENT



All content and experiences have been designed with accessibility and inclusivity in mind to support diverse visitor needs

HANDS-ON ACTIVITIES



QR codes located at the base of the [Experiment at Home](#)

exhibit panels link to a series of hands-on activity pages on the Questacon website.

The experiments can be made with everyday household items – perfect for trying onsite, at home or in the classroom.

These activities encourage creative exploration and extend the exhibition experience beyond the venue.

PUBLIC ENGAGEMENT

Questacon Presents: ZAP! CLANK! POW!

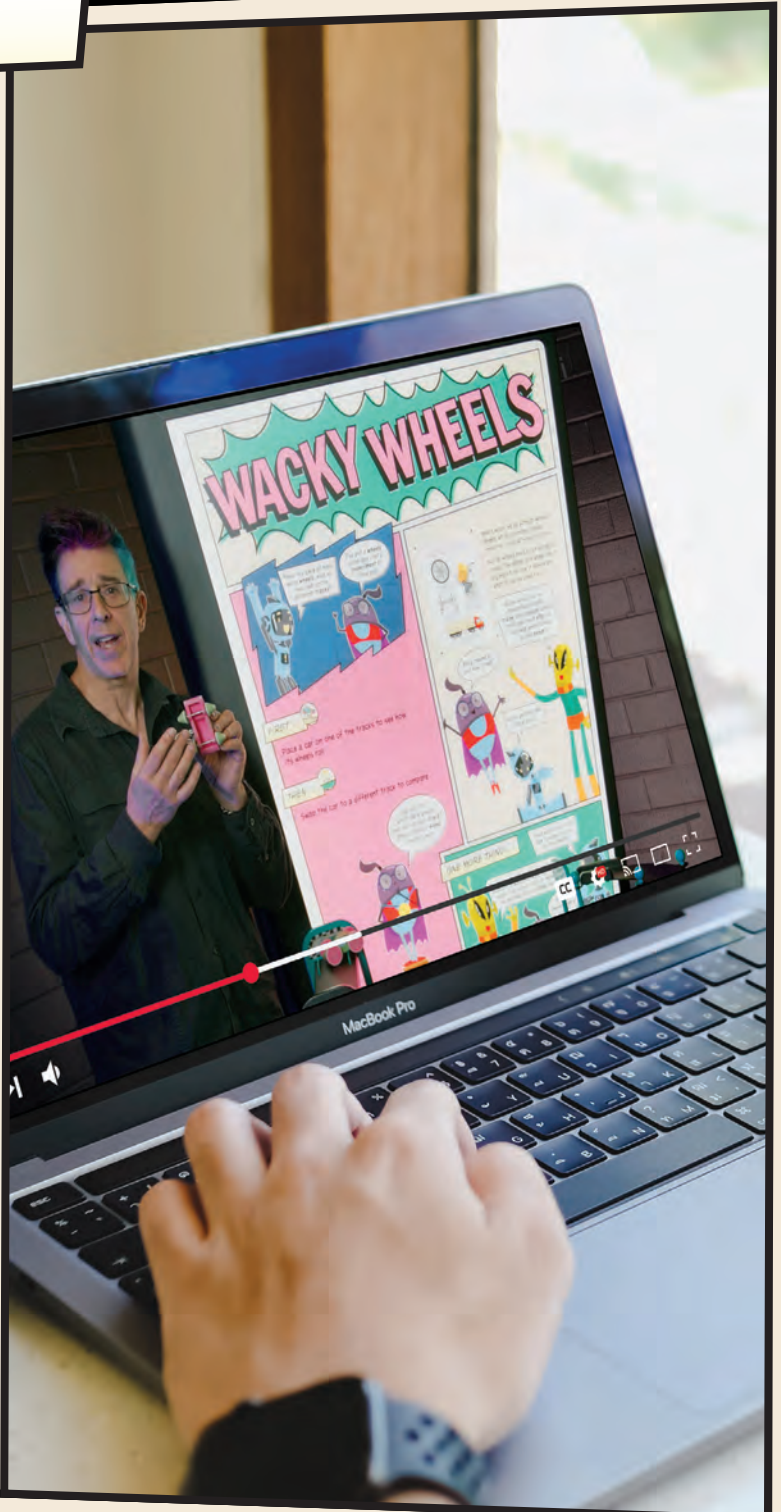
integrates a structured digital layer of QR-linked [explainer videos](#), helping communicate quality STEM experiences and extending the exhibition beyond the gallery into at-home learning.



These virtual resources support host venues by enabling staff training in STEM engagement and gallery facilitation, while saving time developing public programming and engagement activities ahead of exhibition arrival.

Together, this provides a scalable, consistent model combining hands-on exhibits with digital content to enhance visitor engagement and support program delivery across touring venues.

Accessible QR codes on the front of the physical exhibits open in any browser without requiring a YouTube subscription. Scan the above QR code to see examples of our Gallery Assistants explaining how to interact with individual exhibits.



TOURING EXHIBITION ARRANGEMENTS



HOST VENUE REQUIREMENTS

Each of the 3 **Questacon Presents** modules **ZAPI!**, **CLANK!** and **POW!** can stand alone as a 150m² exhibition, or be combined to fill 300m² or 450m² spaces.

- ☐ Minimum gallery height: 2400mm
- ☐ Minimum access: 1500mm wide × 2300mm high
- ☐ Up to 6 days for installation (full exhibition)
- ☐ Up to 6 days for de-installation (full exhibition)

HOST VENUE TO PROVIDE

- ☐ Hire fee
- ☐ Return freight costs
- ☐ Install and de-install fee
- ☐ Insurance at the venue
- ☐ Technician fees
- ☐ 3 staff assisting Questacon technicians for both installation and de-installation of the exhibition.



INSTALLATION MADE EASY

Every exhibit across the full suite of **Questacon Presents** modular exhibitions has been designed for quick and easy installation, limiting venue downtime and disruption.

FLEXIBLE AND CUSTOMISABLE

Modules can be hosted in sequence, providing fresh experiences every few months to encourage repeat visitation.

We appreciate every venue is different, requiring strategies that best suit your needs and those of your visitors.

The Questacon exhibitions team are here to help you meet these needs.



GET IN TOUCH

Contact the Questacon Travelling Exhibitions team
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Travelling Exhibitions

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Australian Government



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